Radio Art:
A Slovak perspective

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Abstract

January 16, 2000, marked the history of Slovak New Media art and technologies with the first international internet radio art project. Entitled LENGOW and HEyeRMEarS Meet Radio Artists, it was a live acoustic performance that utilized radio internet broadcast between ORF1—Kunstradio Vienna with its project Arts Birthday 1.000.037,[1] *Radio Free B92 Beograd, and Tilos Radim Budapest. The performance took place on 16 Jan 2000, from 11 p.m. to midnight in Nové Zámky, Slovakia (Klik Klub). An edited soundtrack of the event was captured on a CD titled "SOUND OFF 1999-2000." On the occasion of the staging of the performance, the following text attempted to summarize the history of radio art in the world, pointing out its increasing possibilities in the age of new technologies.*

What Is Radio Seen From Another Vantage Point?

Scientific progress has been so dynamic that illusions proffered to us by the new media several years ago must seem archaic to the youngest generation. This not only concerns when, in the 1970s, after man's landing on the Moon, people were allowed to delve into futuristic dreams and visions of spaceships as they would abound in the year 2000. It is equally true of computer animations of the mid 1990s that are firmly anchored in history so that their "archaeological placement" is simple. One of the reasons this material seems old is that the year 1995 meant a breakthrough in terms of accessibility of computers for broad circles of a young, computer oriented generation that cheerfully accepted "Pentium inside" as a means of self-expression.

The development of new technologies influenced ordinary lives of consumers, but also artistic endeavours. Following the first ventures in experimental movie making into the 1920s and their revival in the 1960s, as well as multimedia performances, Op Art and kinetic visualisations, the 1970s saw the rise of video art that, on the one hand, followed the example of experimental film, and on the other hand that of conceptual art. Conceptual art later, especially in the 1980s, experienced a smooth transition into the narrational. New technologies also influenced the development of music: the late 1950s and the entire 1960s brought about a golden age of new experiences in sound. Experimental and electroacoustic music at that time accelerated certain streams and concepts almost a decade ahead of their time and helped to shape visual arts progressively. On the artistic scene, besides video and television, radio, too, is gaining attention as a mean of communication. Its first exploitations go back to the 1920s.

If we think of the way we have been kept up to date concerning the development of personal computers in the last fifteen years, we might perceive what it must have felt like back in the times when, almost 100 years ago, radio set out on its journey. Similar to the development of book printing in the 1400s, this ephemeral, elusive medium once again advanced interpersonal communication a step forward. In the first half of the twentieth century it slowly consolidated as a mass media manipulator, to initiate towards the end of the century an individualization that culminates in the postmodern age in which it may act as one of the creators of interdisciplinary art within the mass media. An architecture of sonic space, a theatre of ideas, a space for uncensored provocation, but also defence of minority rights and a resistance against mass distributed culture function as a stimulus for this artistic genre. This is an artistic form that utilizes common radio waves which initiate and jumpstart brain waves, forcing the mind to think and adopt an attitude. Radio is a flight of the mind, of dreams without a concrete tangible body—it is an anti-corporeal concept of the transfer of ideas. Radio is mythologically different from simply listening to "noise" at midnight. It is a postmodern alchemy of "sounds and noise," making clouds habitable, allowing you with the help of a minuscule device to grasp ideas that freely float between heaven and earth, and to place them in your own pocket.

New technologies—and radio is to be counted one of them—as part of the development of art open the door from the static to the dynamic, from the material to the immaterial, from the "timeless-eternal" to time-bound art, art whose existence flows in time. Radio, in its products, like a video clip, even admits the possibility of integrating different levels of information and art. From the point of view of technological development radio may be described as a "creative anachronism," as it only fully enters the life of art half a century after it became accessible to the masses. Evidently a tendency contrary to that of "noise music" may be observed here, if we realize that rap music only becomes part of common culture eighty years after Russolo's "noisophones," fifty years after Cage's concerts and thirty five years after Fluxus concerts and objects that featured gramophone records. Only when gramophone records began to become useless trash did we find a way to recycle them in the form of rap or techno—which thus allows them to return "from the dump" into our acoustic space. That is similar to the radio, since artists only came to discover it for their work in the final twenty years of the previous century; such a late discovery seems to bear out Heidegger's assertion that "extreme possibilities may only be explored at the end of something." Not only are objects created that, similarly to those assembled from trashy television sets (Nam June Paik), consist of radio devices (for instance Jean Tinguely, *Radio Sculptures*, 1964; Gordon Monahan, see below), but similarly to the way acoustic material is being handled in sound recordings, we see the treatment of an overload in radio signals, a treatment helped by new technologies beginning with pocket radios, radio walkmans and micro-loudspeakers, and ending with internet radio broadcast and computer oriented radio.

In today's day and age that has swamped humans in acoustic material and acoustic experience, over satiating them with permanent and empty acoustic bombardment, people on the one hand feel a greater need for silence, but on the other, a need for a selective, creative, inventive listening of worthwhile material that has become accumulated in the database during the long history of the medium. A single person in its activity may overstep the boundary, participating in the creation of space: that is the highest potential of new technologies, that is one of the ways for the new radio, one that today makes radio different from how we traditionally used to regard it.

A Short History of Radio Oriented Art

In their introduction to *Wireless Imagination* (1992),[2] Douglas Kahn and Gregory Whitehead emphasize that there is no history of the development of Sound Art and radio art, that no linear continuity exists, no biographical plots in their development and, as an object of history, their volume therefore cannot provide any chronicle for the general history of art.

Certain salient points are nevertheless confirmed by most sources. These are, without question, important figures such as Walter Ruttmann, Velemír Khlebnikov, Filippo Tommaso Marinetti, Pino Masnata, Bertolt Brecht, Antonin Artaud (*To Have Done With The Judgement of God*), John Cage, William Burroughs, Marshall McLuhan, and Peter Weibel. These personalities formed the fundamental background and drew attention to radio as an instrument of artistic projects. Since the 1970s, a large number of projects have been running parallel in Canada, the United States, and Australia especially because radio there is a genuine part of everyday life, not merely in being passively received, but also in active broadcast that helps listeners overcome large geographical distances. For instance, in Australia regular classroom instruction may happen by way of radio transmission; this later led to the utilization of the medium in concerts. Concerts which were broadcast simultaneously from various parts of the Australian continent or in connection with Europe began to appear in projects by Warren Burt, Jon Rose, Ross Bolleter and others. The situation in Austria has been different, as Vienna has had strong ties to conceptualism, and therefore the conditions for the creation of conceptual projects in media (video, industrial television, television broadcast, and finally also radio, today often in conjunction with the internet) are open in state institutions, just as much as they are in other outlets as the Ars Electronica Festival in Linz.

Let us first return to the beginning of the century when the poet Velemír Khlebnikov, in presenting his work, emphasized "the expression by consonant sounds more than by conventional semantics, thus forming a universal language based on similarly sounding original foundations" (the manifesto "Declaration of the Word As Such," 1913), along with Vladimir Mayakovsky and David Birliuk.[3] This Russian futuristic painter and poet, after arriving in New York in 1927, proclaimed himself to be a radio artist, radio futurist, a member of the Universal Camp of radio modernists, and a founder of the radio movement; he was the one to declare, "The radio epoch and radio style is our present age." Khlebnikov's programmatic statements found themselves at odds with the development

of the radio as a form of mass communication, a secret weapon of military industry and espionage. In 1921, this led the poet to write the manifesto "The Radio of the Future."[4] Khlebnikov understood radio as "the basic tree of knowledge—such that will establish new paths to limitless empowerment and that will unify mankind." Translated from the language of the 1920s Soviet Russia, this formulated the task to realize the power of the radio as "The Big Magician" and "spiritual sun of a nation," its utilization in hypnotic suggestion and in the subjugation of the consciousness of newly unified mass populations. In his manifesto, Khlebnikov mentioned the possibility of misuse of the new radio technology for brainwashing in agit-prop projects by futuristic artists that aimed at the creation of unified masses of working people by navigating them ideologically. The ever present loudspeaker became not only a threat, but also a symbol of the direct, almost personal contact with the leader. Vladimír Tatlin planned to place a radio station into the proposed cylindric spiral of the *Monument of the Third Internationale*, and Stalin talked about the radio and film as means for eliminating alcoholism in Russia. Radio was similarly misused and appropriated as a strategic weapon ten years later in Germany.

In the period between the wars, artists in Western Europe were dealing with problems of a different type, tackling acoustic determinancies of words (phonic poetry) that had their early origins in the work of Scheerbart (*Kikakoku*, a phonic poem of reduced sounds, 1897, Berlin) and Morgenstern (*Galgenlieder*, 1905). In Italian Futurism, important influences were Luigi Russolo's proclamation "Art of Noise" (1913) and his manifesto "Destruction of Syntax, Imagination Without Strings, Words In Freedom" (1914).[5] Developing these impulses, Filippo Tommaso Marinetti and Pino Masnata in the manifesto "La Radia" (1933) suggested an acoustic solution to the artistic experience, stressing "wireless imagination" and the "simple organism of radiophonic sensation";[6] in the same year they performed the first radio broadcast of phonic art at Radio Milano. Sonic absurdities were utilized by Kurt Schwitters in *Anna Blume* (1919), and his *Spate, in Urlaten* was broadcast by the Süd-Deutscher Rundfunk Station in 1927. Later artists engaged in phonetic experiments—among them *Proposition Twenty Two* (Jakobson, Karchevsky) in 1928—that also gave rise to a new philological and semiotic discipline, phonology, that scientifically examined sounds produced by humans. Further innovations included phonovisual poems (Hans Arp, Vassili Kandinsky), *Onomolingua, o verbalizzazione astratta* by Fortunato Depero (in which sounds of moving cars and trains were verbally reproduced), and Arturo Petronio's *Verbophonies*. An example in the opposite direction is provided by the composer Edgard Varèse who began with ambitious, un-performable and, in their nature, radiophonic symphonies *Space*, *The Red Symphony*, *Symphony of Revolution*, and finally *The Astronomer,* whose subject matter was a collision of the Earth with Sirius in the year 2000. Collaborators in his projects were Alejo Carpentier, André Malraux, and Antonin Artaud (*There Is No More Firmament For The Astronomer*, 1932). As early as in 1932, Varèse envisioned a simultaneous performance of works by means of radio transmitters whereby (for instance) each voice might with mathematical precision be transmitted from a different radio station located anywhere in the world. Radio may well be said to have accomplished Erik Satie's idea of music as furniture, as a sound component of the environment. From 1946 onwards, Antonin Artaud concentrated his attention on his vision of a "body without organs," on the necessity of a study of the body for the need of actors; as a proof of his concept of theatre he prepared the text of the performance *Pour finir avec le jugement du Dieu* (*To Have Done With the Judgement of God*), the first genuine presentation of the Theatre of Cruelty,[7] performed in a factory hall and broadcast by radio. The unique, one hour acoustic project never actually made it on air due to censorship.

Futurists probably influenced the history of the twentieth century art the most and they anticipated many later developments, but their collaboration with the political establishment and a censorship of Futuristic ideas that followed as a rule brought disrespect to innovators. Their political involvement and a symbiosis with the ruling political power resulted in their being pushed to the margin for fifty years, stigmatizing them as being "quaint" at best, an epithet they certainly did not deserve. Let us state the manifesto "La Radia" as an example, where seventeen authors point out "the interference between radio stations and the emerging and disappearing sound."[8] The prophetic idea was not only taken up twenty years later by John Cage, who used the radio in his compositions *Credo In Use* (1942), *Imaginary Landscape Four* (1951), *Water Music* (1952), *Speech* (1955), and *Radio Music* (1956), but was also extended by conceptual authors of the 1970s and noise artists of the 1990s, who considered noise produced by sound waves to be another dimension of information about a given space. Today one may already refer to a special category of "Japanese noise artists" who thanks to a miniaturization of state of the art radio technology, compatible with personal computers, create interactive environmental "noise" settings that visually fit into the suburban cyberspace reality. The resulting sound is, as envisioned, a mesh of radio interferences switched on and off—by no means is it

a collage of spoken words and music that a listener might tune in to. This example demonstrates the far reaching impact of Italian Futurists.

In Germany, it was only a year after radio broadcast started that Hörspiel (radio play) originated and achieved great popularity. Many authors including Alfred Döblin, Walter Benjamin, and Bertolt Brecht wrote special articles that employed the possibilities of the radio and the spoken language. In between 1933 and 1945, however, the production of Hörspiel took a back seat to the machinery of Nazi propaganda. Between 1947 and 1960 though was its golden age and "comeback"; it helped form the character of the post-war epoch in Germany. Jörg Mager published the volume *New Epoch Thanks To the Radio* (1924) and Bertolt Brecht, in 1926, wrote the text *Radio as an Apparatus For Communication*, in which his theory of radio broadcast counted on the participation of the audience—not distribution but communication. Listeners themselves, accompanied by the radio, were supposed to sing Lindbergh's part (or at least to hum the tune). During the performance of *Lindbergh's Flight* (Bertolt Brecht, Kurt Weill and Paul Hindemith) that saw its opening night during the Baden-Baden Festival of chamber music in 1929, it was not, unfortunately, the radio that was used but, contrary to original plans, sections of the play were transmitted to the theatre via telephones. The parallel with today's internet connections is noteworthy: these, too, largely depend on telephone lines. Brecht also noticed the possibilities of the utilization of radio as part of family life and the possible subsequent misuse of radio in state propaganda. As Marshall McLuhan wrote, Hitler managed to rise to power primarily "not with the help of radio but rather in defiance of radio, because at that time the radio was controlled by his enemies" and, at the beginning, there was a noticeable absence of the presentation of Hitler's opinions in the media. Later, though, after entrenching his power, Hitler attributed his continued "political existence to the radio and the system of public loudspeakers."[9] Whereas the German geographic space had its nationalistic interests, radio in America gained equal importance while addressing listeners as "potential customers". It mediated selling, analysing the market, manipulated the consumer, and created demand. Radio was transformed into an instrument of advertising for the unified consumer who was being born. The influence of the radio was shown and confirmed by Orson Welles in his famous program about the invasion from Mars that created such an immaculate and enthralling radio sound picture of imaginary proceedings that mass panic and commotion resulted—for which Welles had to issue a public apology the following day. A further predictable misuse of the radio occurred after World War II, in the pre-television era, in the Communist block countries. By contrast, in the West of the 1950s, the role of a centrally controlled flow of information and public opinion had already been taken over by television. Radio became gradually decentralized, enabling programmers to cater to individual needs of smaller sections of the audience with alternative, more narrowly specialized productions that identified listeners who were unique in terms of their geography, nationality, age, and profession.

Close Encounters

Artists who deal with sound objects, acoustic compositions, and sound installations that sometimes arise out of Happenings, performances, Fluxus productions, experimental poetry, literature and, of course, New Music, have been utilizing, to a lesser or greater degree, the radio as a medium. Space is being opened for acoustic projects and presentations that one might call "cinema for the ear." In 1960, "Das neue Hörspiel" ("the new radio play" or radio drama) made its appearance and was later presented especially by Westdeutscher Rundfunk in Cologne, and then by Bayerischer Rundfunk in Munich. These public broadcast institutions began commissioning experimental writers and creators in acoustic art who thanks to a tradition of several years were able to shape an artistic language that became the substance of a new artistic form and together with traditions of electroacoustic music, experimental montage, collage, concrete poetry, and the theatre of sounds formed a sufficient basis for sound oriented art ("Klangkunst": sound art, sonic art). This art was presented in grand style, during the Ars Electronica Festival, in 1987. In the same year, Documenta Eight in Kassel, as part of a historical retrospective, introduced the group Ars Acoustica—an association of media representatives who "repeatedly move the apparatus of the radio into public space" and present "art initiated and materialized through radio." A climax of presentations of this art occurred at the Ars Electronica Festival of 1989 under the title In the Net of Systems emphasized especially radio art (*Radio Subcom,* by Jon Rose; *Space Violins*, by Kunstradio projects).

Variations of radio art often depend on the subject of interest of the artists. If they concentrate on the spoken word, voice or speech, their work attains the character of verbal plays that may be perceived as part of experimental literature; or the character of experimental theatrical plays that utilize

the dramatic nature of sounds rather than the text (audio, klang theatre). The character of sound poetry is another subgenre. Radio art projects equally may adopt a civic attitude and attempt to defend group, minority or human rights, as in feminist projects, Greenpeace, psychologic counselling in "critical areas," social art, or educational projects for the handicapped.

Projects that concentrate more on music consist of acoustic communication and employ, for instance, assembling of sounds (urban sound, a walk around the town with the microphone; eco-sound or acoustic ecology, taking a walk in natural surroundings, which may be minimalist, documenting sounds of fire, waves, water, wood, stones), sounds of radio waves and interference, musical collage and mixs. The principle of simultaneity discovered in the 1960s is often applied: works sound in parallels next to each other without influencing each other (as in Merce Cunningham's dance and John Cage's music). Concerts or mostly improvised music are transmitted by radio in real time from various places of the globe and the radio listener on stage becomes another independent instrument. What results besides the actual experience in the concert or at home while listening to several radios is a soundtrack of the event that may be further enhanced by deliberate editing. The possibilities of the internet, allowing the broadcast of radio programs, make such projects accessible to a wider circle of artists who emphasize communication—on a formal level or on that of interpersonal human communication transcending the scope of artistic creation. Some radio projects enable interactive input, and thus the composing, decomposing, destructing and replenishing of acoustic material. Other projects of radio art transmit everyday sounds of the reality that surrounds us at a nightly hour when we do not normally have the opportunity to hear them. Still other projects transmit ordinary sounds of remote real spaces into our own real space. For instance, the sounds of a metropolitan rush hour get transferred to a small town radio circuit, or, taking the opposite direction, the sounds of nature or the countryside get transferred into an urban locality. Pirate radio stations exhibit an alternative character for which other than commercial music, image, and style are symptomatic. What counts is the presentation of a community with its own codes and icons, and those radio stations which feel proximity to each other in this respect may thus establish closer communication.

Radio increasingly becomes a provocative medium that has proved attractive for an ever more varied circle of artists. Back in the 1970s, the Canadian Ian Muray instigated a series of projects, *Radio by Artists,* with the participation by Vito Acconci, Laurie Anderson, Dan Graham, and Lawrence Weiner among others. Weiner became well known thanks to his "experimental radio theatre" from the mid 1980s that employed spoken word and music as material in a fashion similar to the way painters and sculptors employ them (Jackson Pollock is mentioned in Weiner's text). An important name in this domain of art is Bill Fontana, who created radio sound objects, *Music From Ordinary Objects* (1977) or sound environments for a chosen space. In a live sound portrait of the city of Cologne, thanks to a radio broadcast of real sounds from loudspeakers perched on buildings in the city, he transmitted sounds to make the "city landscape" audible. The development of music that had started with Russolo, Cage and Pierre Schaeffer's musique concrète led to an implantation of sounds found in the urban landscape, of industrial sounds into music.

These ideas find fertile ground with artists who are primarily interested in the process of the search for sounds that later become their material and information. Taking a walk through city streets, capturing the soundtrack, later becomes part of the installation and this "musical theme" that is being submitted to the consumer via the radio has its significance for the public space. Some projects originated privately and employed coincidence, such as Max Neuhaus's radio art installation *Drive In Music* (1967–68) in which his program could be listened to by any passing driver if their car radio was tuned in to Neuhaus's transmitting frequency. Projects whose thrust is interpersonal communication have had no less impact. Whereas projects of posting art were of material nature, radio art communications work solely through the establishing of a contact, through communication. Artists for whom such a presentation is insufficient may supplement it with fanciful designs of their radio transmitters and may make them movable, such as placing of loudspeakers into the performer's clothes.

The fascination with this space feels like the gold rush. Composers draw from new sound sources and compose in new ways. Thanks to the symbolism of sound objects, they reach across to the boundaries of visual art while accepting synthetic as well as real acoustic material.

As an example of the approach of artists to the new medium and to the understanding of their relationship towards the radio and radio art, I offer the following fragments from the proclamatory statements by the notable Canadian radio artist Hank Bull:

- radio is an invisible statue
- radio is capitalistic terror
- radio is part of the electronic revolution
- radio is spontaneous
- radio is free
- radio pervades our bodies
- radio art is no dance
- radio art is no music
- radio art is a meta-medium
- radio art is cooperation
- radio art is resonance
- radio art is a form of magic
- radio art is telepathy
- radio art is a siren
- radio art is hallucination.[10]

Canadians like to say that television is American but the radio is Canadian. To a large degree Canadians as a nation were defined by the construction of railways and by national radio broadcasts. These were decisive in terms of the national self-consciousness of Canadians and helped to legitimize their territory in the face of the USA. Plato's idea of the size of a town as determined by the number of people who can be addressed by a single speaker loses its validity when radio is invented. Canadians are said to be hypersensitive to sound and that, naturally, includes the radio. Many Canadian artists are committed to radio art which has its regular place in radio broadcasts. Articles and monographs, CDs and CD-ROMs are frequently published. One of the most extensive projects is *Radio Rethink,* organized by Walter Phillips Gallery in 1992.[11] The project included radio broadcast from the gallery's own radio station, as well as installations, performances, and a symposium with talks and lectures. A documentary publication is supplemented by a CD that contains radio art "pieces" of Canadian artists ranging from political or ecological manifestos to a feminist radio opera, as well as a complete documentation of radio art works in Canada in between 1967 and 1992. Another related publication from Walter Phillips Gallery, *Sound by Artists,* takes a closer look at the work of video artists, installation artists, performers, and various other artists who employ sounds, among them: John Cage, Christina Kubisch, Annea Lockwood, Alvin Lucier, Christian Marclay, Gordon Monahan (creator of radio objects), R. Murray Schafer, Stelarc, Bill Viola, and Gregory Whitehead.[12]

Rivers and Bridges: International internet radio art projects

In 1987, the Austrian public radio station ORF 1 founded a section that has since become prestigious: Kunstradio led by Heidi Grundmann.[13] It has since enjoyed an international reputation and accrued a dominant position in the world of radio art. Grundmann is a leading theoretician of radio art. She has initiated, throughout the existence of Kunstradio, a large number of presentations by video artists, "media" artists, composers, "sound artists," and writers who belong to the expanding group of "radio artists." She also commissioned a large number of radio projects for the Ars Electronica Festival in Linz that coexisted with video art in the 1980s, and with interactive art and computer animation in the 1990s. Yet under the influence of new technologies, the character of acoustic works has been changing. Whereas ten years ago they used to be objects and environments utilizing radio waves, the late 1990s witnessed the rise of interactive, interpersonal communication of masses of interested listeners, all of whom "want to be a part of it." The mass approach has consequently influenced the results and so it is inevitable that today it is no longer the project that is relevant but the process of creation, the system of intercommunication. Some of the projects are open for the expert public, such as *Horizontal Radio* (1995) or *SOUND DRIFTING: I Silenzi Parlano Tra Loro* (1999).

Horizontal Radio must be seen as a continuation of earlier simultaneous telematic projects from the early 1990s that were especially significant in their own context, such as *Chipradio* (1992), *Realtime* (1993), and *State Transmission* (1994). All of them were produced by ORF-KUNSTRADIO. The starting point of these projects was the unifying of a net of simultaneous live performances, utilizing various forms of communication (radio, television, telephone, databases) with the intention to stress the communicative potential of the mass media. *Horizontal radio* explicitly cited pioneers of telecommunication art (in Austria this was the period of 1979–86), as was evidenced by the participation of Adrian X (Vienna) and the circle of the Art Pool gallery (Budapest) who years earlier had participated in the first ever telecommunication project uniting artists from Eastern and Western

Europe (*Telefonmusic*, 1983). Twenty two radio stations from Africa, Canada, Australia, USA and Europe took part in the *Horizontal Radio* project to create a hyper-media network with various technological possibilities arising out of interactivity, as well as a telepresentation, enabling authors to be meeting around the clock. The project was shaping the process of the confrontation of social and artistic implications of new technologies on a global level, while individual radio stations were still afforded the freedom of creativity in their own radio art concepts (singing birds in London, metropolitan noise and conversations from Moscow, an archaic solo singer's performance in Beograd, electronically processed sounds captured near the edifice of the Stockholm radio, a Stockholm park, or a street).

SOUND DRIFTING involved twelve loudspeakers placed in city architecture, each of which reproduced a sound from a different part of the world (Austria, Australia, USA, UK) and which was permanently online on the internet and on-side (it was at any time possible to tune in or out, surfing the stations and the spaces between them). Each of the participating parties was allowed to create their own versions of the sound installation, and although the resulting "sound" contained "music," the project did not aim at presenting a work as a "musical product." Its primary goal, once again, was networking—the exploration of one's own network, communication and cooperation, coordination and collaboration between artists, users, and machines. The intent was to let things work out, to listen to the world, instead of actively trying to embellish it. One of the Beograd participants of the *Subtolerance* project, transmitting sounds of post-war Beograd around the clock thanks to an online microphone, employed a technique previously used by Serbian artists, who during the war brought home the sounds of bombardment to the whole world via the internet. Another approach to the radio installation was afforded by the Canadian project, *Public Piano,* which retroactively sent back to the audio space those sounds of the piano which were being created by surfers on the internet, and which were then processed through a connected electronic piano with a MIDI interface. The *SOUND DRIFTING* project was part of the larger radio art project *WIENCOUVER,* which brought together the two most dominant radio stations that have excelled in furthering radio art: ORF Wien and CITR Vancouver. Also included were Jon Rose's projects, *Relativ Violin* (1990) and *Arts Birthday* (2000). In 1996, the extensive *Rivers and Bridges* project created radio bridges between more than twenty radio stations. One of the participants was Slovak public broadcast radio (Radio Station Devín). The focus of the venture was the live broadcast of concerts which were performed in open air at the site where the rivers of the Danube and Morava meet under the Devín Castle, near the Slovak capital, Bratislava.

A further analysis of projects that were part of the Ars Electronica Festival would be futile, as they were all connected with the technological possibilities of the age in which they originated. An "archaeological exploration" would show that the *R.A.M.S. ATTACK—Automatic Radio* project was contemplating possibilities which in 1993 were merely on the horizon of the attainable, but today have become a commonplace reality. These are the transition from electronic to digital broadcasting (via the internet), which was predicted to make broadcasting cheaper, quicker, and more effective. Thus a project that originated only eight years ago introduced ideas that today are regarded as a matter of course. It announced the understanding of the new radio as a means of communication and artistic utilization in the age of new technological improvements. 1996 saw the premiere of *SOS Radio TNC* (*A Media Fiction)* by Beusch/Cassani, who were among the first to launch their own radio station. Visions of the future were being fulfilled at a fast rate and at the time of the media craze concerning cloning (1997), TNC RADIO started the *Clone the Party* project that made use of the direct connection of several radio stations via the internet, creating a space for communication that afforded freedom to the participants by providing them with a private online party floor (a way of sub-networking). All of this was facilitated by DJs and, needless to say, transmitted via the radio and the internet.

Some artists who today devote themselves to radio art have, since the 1970s, been among the pioneers of telecommunications art in international networking projects that went all the way from mail art through to telephones, industrial (slow scan) TV, and fax, through to the computer communications of the early 1990s. Their work transcends individual disciplines, allowing authors to re-contextualize contents into new hybrids. Their work reflects socio-cultural complexities and contradictions of life at the end of the twentieth century seen from the vantage point of the problems of art as the communication of ideas in an environment that is dominated by the media.

The radio, thanks to its technological non-complexity and the status of a "first born" in the field of media culture, helped to pre-form McLuhan's "global village" that was later developed by television and computer networks—with the truly global internet bringing the process to the point

where we observe it today. In the early 1980s, visual artists and performers, composers, interpreters and writer-performers appropriated the radio as an alternative artistic space, an arena for presenting their artistic creativity, as a distribution system or "public art forum" for "their own" public. In this sense radio art of the 1980s and early 1990s provided them with an alternative space similar to the space conceptual artists and performers were searching for since the early 1970s. Radio became a space for presenting alternative art. By using it as such, both generations managed to elude the marketing intentions of galleries and were pushed outside of the traditional "arts domain," remaining a mental alternative but not a new alternative art business. Their activities were sustained not by the selling of their art, but by the constantly falling price of steadily more accessible, high quality, new (even if second hand) technologies. Many audio and radio artists use sonic space as a space for performances, just as they would use a room or the stage. The most important characteristic of their work is its dimensionality, the compositional and architectonic utilization of acoustic space. Behind verbal language there is the language of sound as a place. The sound becomes an object, a visual; the voice becomes corporeal. The sound creates a temporary stage for the action of the text, for its "functioning." The sound determines and describes physical space in time and space. Formal aspects of visual art and performance are represented in language which, in equal measure, applies them to aural representation but often is more incisive than mere music or literature. Radio art is interdisciplinary performance in several areas of perception.

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Notes

[1] http://thing.at/orfkunstradio/2000A/ART_BDAY/main.html Some of the material in the article reproduced above has been adapted from: Michel Murin, "Archeological Exploration—A short trip in the history of radio-oriented art," http://www.radio art.sk/frames.php?url=http%3A//www.radio art.sk/doc/radio art/inx_archeo_eng.html accessed Jul 2005 – March 2006.

[2] Kahn and Whitehead, eds.

[3] See Khlebnikov.

[4] Ibid.

[5] See Apollonio, Umbro, ed.

[6] Marinetti and Masnata pp. 266-7.

[7] See Artaud.

[8] Marinetti and Masnata pp. 266-7.

[9] Marshall McLuhan, *Understanding Media: The extensions of ma*n (London, Sphere Books, 1967).

[10] Augaitis and Lander, eds.

[11] See ibid.

[12] Lander and Lexier, eds.

[13] http://www.thing.at/thing/orfkunstradio/; http://www.thing.at/orfkunstradio/RADIO/radio art.html